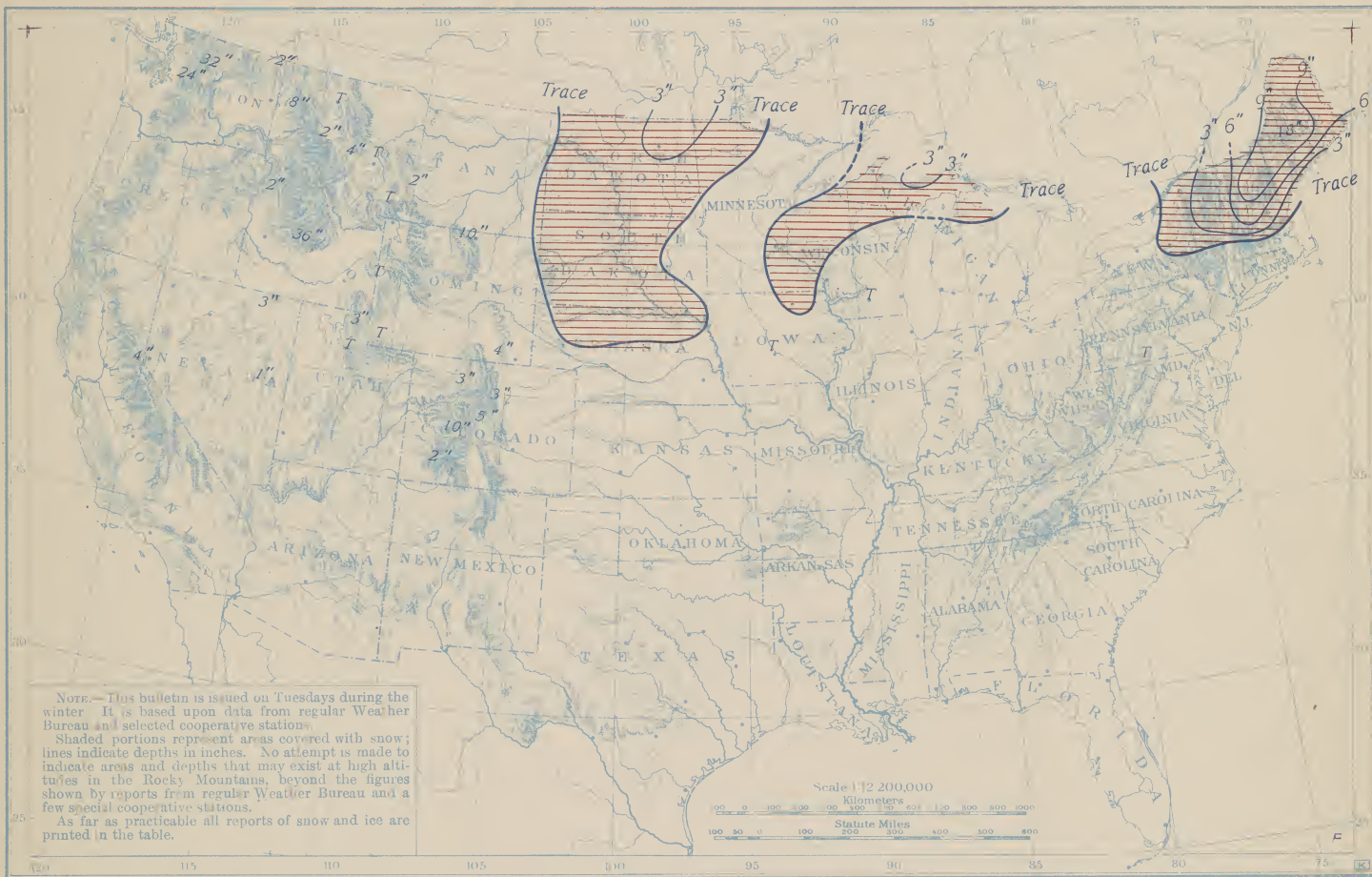


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# SNOW AND ICE BULLETIN.



WASHINGTON, D. C., December 4, 1917.

## DEPTH OF SNOW.

GENERAL REVIEW OF SNOW CONDITIONS FOR OCTOBER AND NOVEMBER OF THE PRESENT YEAR.

During October snowfall was widely distributed and the amounts in the more eastern districts were in many cases far greater than ever before recorded so early in the fall. The storm that appears to have given the largest amounts moved from the Lake region to the middle Atlantic coast and New England from the 23d to the 25th.

In portions of the Ohio Valley, Lake region, and Appalachian Mountain districts the snowfall was from 2 to 10 inches or more, and it remained on the ground several days. Considerable snow occurred in the West and Northwest about the 28th and 29th.

For the month there was more or less snowfall over all central and northern districts from the Rocky Mountains eastward, the depths ranging from traces in the southern limits to 12 inches or more from North Dakota eastward to the upper Lakes and at elevated points in the Appalachian Mountains from the Virginias to New York, and at points in northern New England. In the western mountain districts snow had accumulated to depths of from 5 to 20 or 30 inches in portions of Colorado and to the northward, but over the Plateau regions and generally in the Sierra Nevada and Cascade ranges there was little or no snow during the month.

During November snowfall was light in all districts; in fact precipitation of any character was unusually deficient, and in many districts the month, as a whole, was among the driest ever known. The first two decades of the month were remarkable for the uniform absence of precipitation in all parts of the country. During the last 10 days, however, showers were fairly frequent over the Lake region and to the eastward, and some snow occurred in the more northern portion; at the same time some good rains occurred in Texas, Oklahoma, and portions of adjacent States, and beneficial showers were received in most of the Gulf and South Atlantic States. In the district from the Rocky Mountains westward the month continued dry throughout and but little snow appears to have fallen even in the high mountains.

On the 1st and 2d of the present month considerable precipitation occurred over the northeastern districts, rainfall being quite heavy along the coast from New Jersey northward, while farther inland snow fell to considerable depths. In the far western districts local rains or snows have occurred during the past few days, but the falls appear to have been light.

At 8 p. m. Monday, December 3, the interior and northern portions of New England had a snow cover ranging from 3 to 10 inches or more, and there was a slight covering in portions of the upper Lake region and the Dakotas. Elsewhere to eastward of the Rocky Mountains there was little, if any, snow. In the western mountain districts small amounts have accumulated in the higher elevations of Colorado, Wyoming, Idaho, and northern Washington, but in the Plateau there is but little or no covering and the Sierra Nevada are unusually free of snow for the season of the year.

## ICE IN RIVERS AND HARBORS.

Somewhat more ice than usual for the season has formed over the rivers and lakes of New England, the thickness ranging from 4 to 8

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 3, 1917.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
California.	Inches	Inches	Michigan—Contd.	Inches	Inches	New York—Contd.	Inches	Inches
Summit.....	4	.....	Escanaba.....	T.	0.0	Canton.....	1	.....
Colorado.			Houghton.....	1	0.0	Syracuse.....	T.	.....
Crested Butte....	10	.....	Marquette.....	4	0.0	North Dakota.		
Dillon.....	3	.....	Saginaw.....	0	0.5	Bismarck.....	T.	†
Leadville.....	5	.....	Sault Ste. Marie..	2	*	Devils Lake.....	4	.....
Rico.....	2	.....	Minnesota.			Williston.....	T.	*†
Steamboat Springs	3	.....	Canby.....	T.	0.0	Pennsylvania.		
Connecticut.			Grand Meadow...	1	.....	Hyndman.....	T.	.....
Hartford.....	0	†	International Falls	1	.....	South Dakota.		
Idaho.			Leech Lake Dam..	T.	.....	Huron.....	0	*
Galena.....	36	.....	Minneapolis.....	T.	.....	Pierre.....	1	0.0
McCall.....	2	.....	Moorhead.....	T.	*	Rapid City.....	T.	0.0
Vienna.....	36	.....	Roseau.....	3	.....	Yankton.....	2	0.0
Wallace.....	8	.....	Thief River Falls.	T.	.....	Utah.		
Iowa.			Montana.			Logan.....	3	.....
Charles City.....	T.	.....	Bozeman.....	T.	.....	Salt Lake City..	T.	.....
Des Moines.....	T.	0.0	Butte.....	T.	.....	Vermont.		
New Hampton.....	T.	.....	Findon.....	2	.....	Bellows Falls...	8	.....
Sioux City.....	T.	0.0	Hat Creek.....	2	.....	Brattleboro.....	10	6.0
Maine.			Haugan.....	2	.....	Northfield.....	11	.....
Bangor.....	6	4.0	Kalispell.....	T.	*	St. Johnsbury...	8	.....
Eastport.....	7	0.0	Nebraska.			Wells River.....	6	.....
Gardiner.....	8	2.0	Alliance.....	1	.....	White River J'n..	2	.....
Greenville.....	18	8.5	Halsey.....	1	.....	Washington.		
Houlton.....	5	.....	Valentine.....	T.	.....	Cascade Tunnel..	32	.....
Lewiston.....	8	2.0	Nevada.			Laurier.....	2	.....
Millinocket.....	21	.....	McGill.....	1	.....	Stampe.....	24	.....
Portland.....	2	0.0	North Fork.....	3	.....	Wisconsin.		
Van Buren.....	8	.....	New Hampshire.			Barron.....	T.	.....
Massachusetts.			Concord.....	4	4.0	Madison.....	T.	.....
Concord.....	T.	.....	Hanover.....	8	.....	Medford.....	T.	.....
Fitchburg.....	T.	4.0	Lancaster.....	10	.....	Wausau.....	T.	†
Holyoke.....	T.	.....	W. Stewartstown.	6	.....	Wyoming.		
Mansfield.....	T.	.....	New York.			Alta.....	T.	.....
Turners Falls....	6	.....	Albany.....	0	†	Dome Lake.....	10	.....
Michigan.						Evanston.....	T.	.....
Alpena.....	T.	0.0				Fox Park.....	4	.....

\*Shore ice. †Floating ice. T.indicates trace.

inches in the interior and northern districts, but in other portions of the country there is little or no ice on the main streams and larger lakes.

## GENERAL SUMMARY.

At the beginning of winter farm work is very generally well advanced, due, in a large measure, to the opportunities afforded during November for almost continuous outdoor work. Corn is largely harvested, and such as was not injured by frost and freezing earlier in the season dried rapidly, as a result of the prevailing dry weather of the past month.

Fall sown grains over the northern districts appear to be in fairly good condition to enter the winter, but in the more southern States seeding was delayed by wet weather in some sections and by drought in others, and the late sown grain is generally in poor condition.

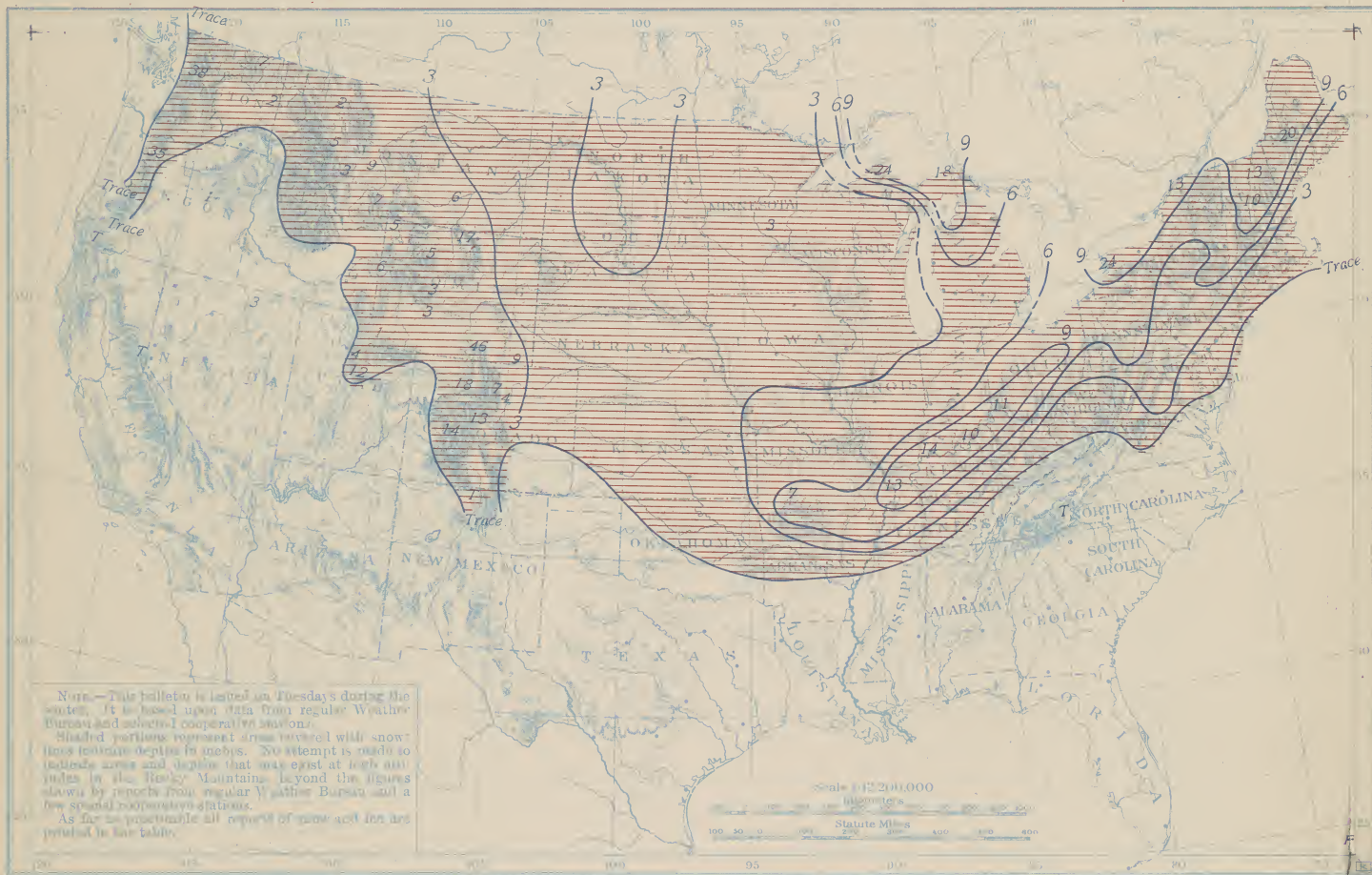
P. C. DAY, Climatologist and Chief of Division.



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S. J. Day

# SNOW AND ICE BULLETIN.



WASHINGTON, D. C., December 11, 1917.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 10, 1917.

## GENERAL REVIEW OF THE WEATHER DURING THE PAST WEEK.

The early part of the week just closed was comparatively free from adverse weather, although light rains or snows prevailed at intervals over the more northern districts, and temperatures were generally below the normal for the period.

By Friday low pressure had developed in central and western Texas, and a cold area of considerable magnitude had moved from the British Northwest into the Dakotas and adjoining States. During the following 24 hours the storm in the Southwest developed greatly, and, in its movement to the eastward, brought rain or snow to all districts from the Mississippi Valley to the Atlantic coast, save in New England and portions of the Middle Atlantic States. In portions of the lower Ohio Valley heavy snow prevailed, depths of about 15 inches being reported from local points.

By Sunday morning the storm had moved rapidly to the lower St. Lawrence Valley and more or less rain or snow had fallen over the remaining portions of the eastern districts. With the northeastward progress of the storm somewhat warmer weather prevailed, the snow changed to rain, and only at a few points in the Lake region was snowfall heavy, save in the Ohio Valley.

During the above period the high pressure area in the Northwest had moved far to the southward, carrying the line of freezing temperature to the Texas coast, and by Sunday morning freezing weather had extended into all the Gulf and South Atlantic States and to the interior of central Florida. At 8 a. m., Monday, the weather had cleared in most districts and low temperatures prevailed generally from the Rocky Mountains eastward.

At the present writing temperatures are far below the seasonal average over the eastern half of the country, the minimum readings for Monday night at points in the Ohio Valley being lower than have occurred previously in December during the past 40 years or more. In the far Northwest low pressure is developing with indications of a break in the severe cold of the past few days.

## DEPTH OF SNOW.

The storm of the latter part of the week gave considerable snow cover over a large region from northwestern Arkansas and eastern Kansas northeastward to the Lakes region and New England, the greatest depths appear in the immediate Ohio Valley, from 6 to 14 inches, and in the upper Lakes, where as much as 2 feet was recorded locally near the southern shore of Lake Superior. Some increases over the amounts reported last week appear in the northern districts from the Great Lakes westward, and at points in the central Rocky Mountain region, but generally over the Plateau and in the Sierra and Cascade regions there was no increase, in fact the small amounts reported last week in the Sierra have largely disappeared.

The snow cover now over the greater part of the winter wheat region is timely, in view of the severe cold of the last few days and the generally poor condition of much of the late sowings.

## ICE IN RIVERS AND HARBORS.

Low temperatures during the latter part of the week over the northern districts caused the formation of considerable ice on the rivers and lakes of those regions. Ice from 5 to 9 inches thick is reported on the upper Missouri and somewhat less appears on the Mississippi from Keokuk northward. Small amounts are reported from the northern tributaries of the Ohio, and from central Virginia northward the ice has attained considerable thickness over the smaller streams.

In New England the ice remains about as reported last week, but over the Great Lakes there is now from 2 to 4 inches in most of the harbors, with a maximum thickness of 11 inches in western Lake Superior.

Compared with the same period last year there is now much more ice over all northern districts from the Mississippi Valley eastward.

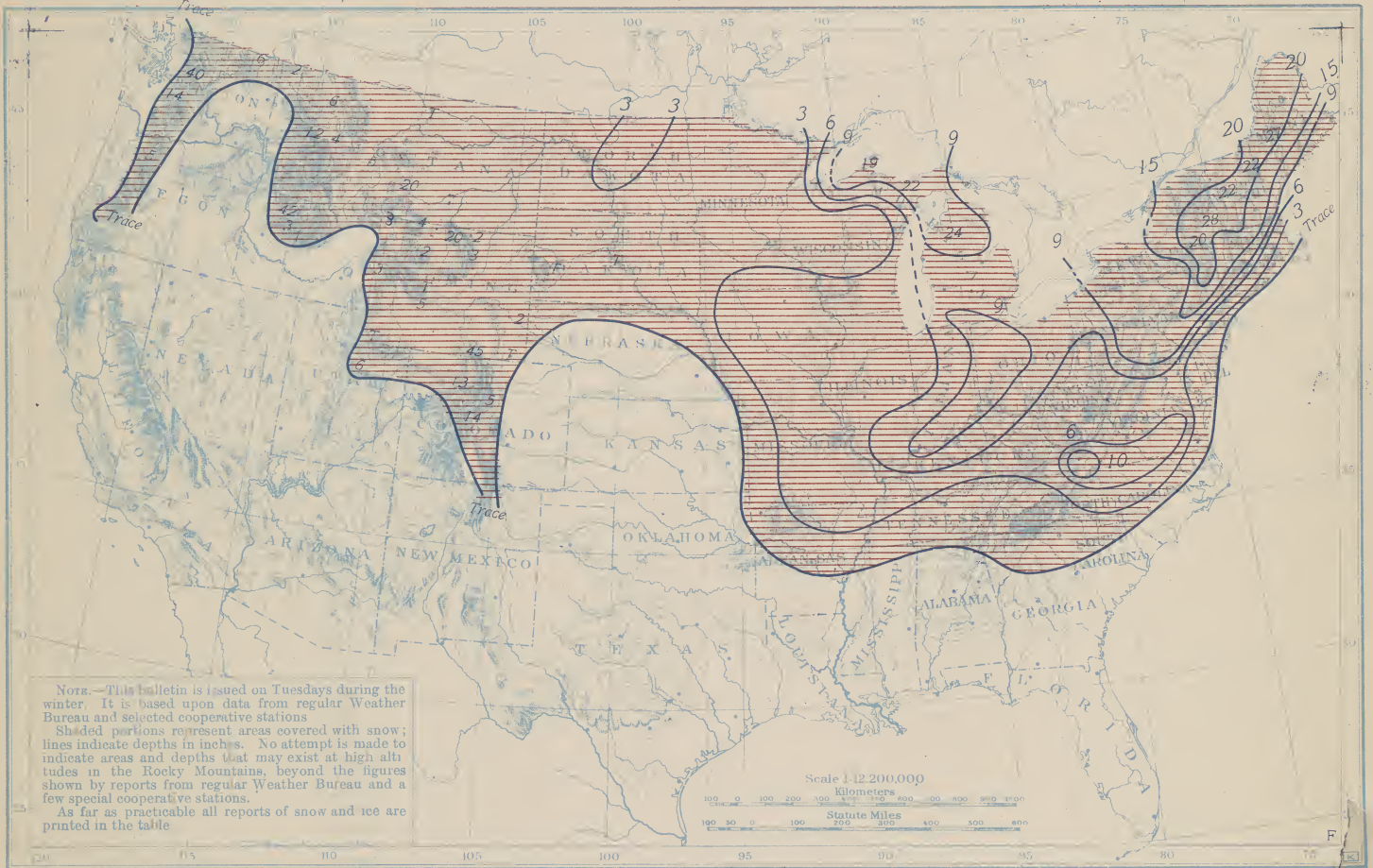
P. C. DAY, Climatologist and Chief of Division.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arkansas.	Inches	Inches	Massachusetts—Con.	Inches	Inches	New York—Contd.	Inches	Inches
Bentonville.....	5		Holyoke.....	2		De Ruyter.....	5	
Fort Smith.....	2	0.0	Nantucket.....	3	0.0	Ithaca.....	7	
Little Rock.....	3	0.0	Turners Falls.....	9		New York.....	T.	
California.						Oswego.....	8	4.5
Summit.....	T.		Alpena.....	5	*	Plattsburg.....	4	
Colorado.			Ann Arbor.....	4		Rochester.....	9	1.5
Crested Butte.....	14		Cadillac.....	7		Syracuse.....	6	
Denver.....	4		Calumet.....	13		Warwick.....	4	
Dillon.....	7		Detroit.....	4	4.0	North Dakota.		
Leadville.....	13		Escanaba.....	2	*	Bismarck.....	3	9.0
Steamboat Springs.....	18		Grand Haven.....	6		Devils Lake.....	4	
Connecticut.			Grand Rapids.....	3		Williston.....	1	8.5
New Haven.....	T.	0.0	Harrisville.....	6		Ohio.		
West Cornwall.....	5		Houghton.....	24	3.0	Ashland.....	6	
Dist. of Columbia.			Lansing.....	4		Cincinnati.....	11	0.0
Washington.....	T.	0.5	Ludington.....	5	0.0	Cleveland.....	6	*
Idaho.			Mancelona.....	8		Columbus.....	7	
Pocatello.....	T.		Manistee.....	10		Coshocton.....	10	
Illinois.			Marquette.....	19	0.0	Dayton.....	7	3.5
Cairo.....	13	†	Newberry.....	13		Siskiyou.....	7	4.0
Camp Point.....	3		Saginaw.....	4	4.0	Sandusky.....	7	4.0
Chicago.....	T.		Sault Ste. Marie.....	5	3.5	Tiffin.....	5	
New Burnside.....	10		Minnesota.			Toledo.....	5	4.5
Peoria.....	1	3.0	Canby.....	2		Wapakoneta.....	8	
Pontiac.....	3		Duluth.....	T.	11.0	Waverly.....	8	
Springfield.....	3		Grady.....	3		Oregon.		
Urbana.....	3		International Falls.....	2		Gov't Camp.....	25	
Indiana.			Minneapolis.....	2		Prairie City.....	1	
Bloomington.....	5		Moorehead.....	T.	8.0	Siskiyou.....	T.	
Evansville.....	14	2.0	St. Paul.....	2	7.0	Pennsylvania.		
Fort Wayne.....	2	*	Wheaton.....	2		Drifton.....	3	
Indianapolis.....	6		Winthrop.....	1		Erie.....	8	2.0
La Fayette.....	2		Missouri.			Harrisburg.....	5	4.0
Madison.....	8		Brunswick.....	5		Hyndman.....	8	
Marion.....	3		Columbia.....	4		Mt. Pocono.....	6	
Paoli.....	7		Hannibal.....	2	†	Pittsburgh.....	4	†
Richmond.....	5	3.5	Ironton.....	5		Reading.....	4	0.0
Terre Haute.....	5		Kansas City.....	4	†	Seranton.....	3	
Iowa.			Poplar Bluff.....	4		South Dakota.		
Charles City.....	2		Rolla.....	5		Huron.....	1	9.0
Des Moines.....	1	5.0	St. Joseph.....	4	†	Pierre.....	5	*
Dubuque.....	T.	5.0	St. Louis.....	5	†	Rapid City.....	T.	0.0
Estherville.....	2		Springfield.....	7		Yankton.....	2	5.0
Forest City.....	2		Montana.			Tennessee.		
Keokuk.....	1	8.0	Billings.....	6		Chattanooga.....	T.	0.0
Sioux City.....	1	2.0	Bozeman.....	7		Memphis.....	6	0.0
Kansas.			Butte.....	3		Nashville.....	2	0.0
Concordia.....	T.		Havre.....	3		Utah.		
Dodge City.....	1	0.0	Helena.....	9		East Portal.....	12	
Ellinwood.....	2		Kalispell.....	2		Heber.....	4	
Garden City.....	T.	0.0	Miles City.....	1		Vermont.		
Topeka.....	2		Missoula.....	5		Brattleboro.....	14	8.5
Wichita.....	T.		Nebraska.			Burlington.....	3	0.0
Kentucky.			North Platte.....	1	0.0	Northfield.....	15	0.0
Bowling Green.....	6		Omaha.....	2	*	West River J'n.....	12	
Eubank.....	4		Valentine.....	1		Virginia.		
Hopkinsville.....	14		Neada.....	1		Lyndhurst.....	2	0.5
Lexington.....	9		North Fork.....	3		Staunton.....	4	
Louisville.....	10	0.0	New Hampshire.			Cascade Tunnel.....	88	
St. John.....	11		Bethlehem.....	13		Laurier.....	7	
Williamsburg.....	1		Concord.....	10	7.0	Spokane.....	2	
Maine.			Hanover.....	10		Parkersburg.....	2	
Bangor.....	7	8.0	Keene.....	8		West Virginia.		
Cornish.....	13		W. Stewartstown.....	9		Sparksburg.....	2	*
Eastport.....	3	0.0	New Jersey.			Wisconsin.		
Gardiner.....	10	4.0	Cape May.....	T.	1.5	Green Bay.....	T.	5.0
Greenville.....	20	8.5	Phillipsburg.....	3		La Crosse.....	T.	4.0
Lewiston.....	12	8.0	Sandy Hook.....	T.	0.0	Milwaukee.....	T.	0.0
Millinocket.....	20		Trenton.....	1	†	Wausau.....	1	4.0
Portland.....	3	0.0	New York.			Wyoming.		
Maryland.			Albany.....	2	2.0	Cheney.....	9	
Baltimore.....	T.	0.0	Binghamton.....	3		Dome Lake.....	17	
Frederick.....	4		Buffalo.....	24	3.0	Lander.....	3	
Massachusetts.			Canton.....	13		Sand Lake.....	46	
Boston.....	T.		Cooperstown.....	T.		Sheridan.....	5	
Fitchburg.....	8		Cutogue.....	T.		Yellowstone Park.....	5	

\* Shore ice. † Floating ice. ‡ Ice gorged. T. indicates trace.



SNOW AND ICE BULLETIN.



WASHINGTON, D. C., December 18, 1917.

GENERAL REVIEW OF THE WEATHER DURING THE PAST WEEK.

The severe cold prevailing over the districts to eastward of the Rocky Mountains at the close of the preceding week continued into the week just ended but with some warming up, due to lower barometric pressure and resulting cloudy weather. By Thursday a shallow depression had formed to the southward of the Great Lakes, which moved rapidly eastward during the following 24 hours and by Friday morning it was central near the southern New England coast as a storm of great severity. High winds and heavy precipitation prevailed along the Atlantic coast from Chesapeake Bay to the Canadian Maritime Provinces. The precipitation along the immediate coast was partly rain but farther inland heavy snow fell which drifted badly, greatly interfering with railroad and other traffic. During the same time light snows had prevailed over nearly all northern districts from New England westward, except that in the far Northwest the precipitation was mostly as rain.

Following the severe storm referred to above colder weather over-spread the eastern districts and it continued cold to the westward, although there was some warming up in the Northwest. Low temperatures for so early in the winter continued throughout much of the country during the remainder of the week with occasional light local snows over northern districts and rains along the Pacific coast from California northward, and at points in the Gulf States.

At 8 a. m. Monday the high pressure that had dominated the weather during most of the week had moved to the eastern Canadian Provinces and generally higher temperatures prevailed in practically all districts to the westward.

At the present writing high pressure and cold weather still persist in eastern districts, although there has been some moderation in the cold, while in the Mississippi Valley and to the westward the temperatures are now generally near the normal for the first time since early in the month. Heavy local rains have occurred during the past 24 hours at the lower elevations of Washington and Oregon, and it is probable considerable snow has also fallen in the mountains of those States and to the eastward.

DEPTH OF SNOW.

No marked change has occurred in the area covered by snow as compared with the preceding week, except that considerable portions of the Carolinas and southern Appalachian Mountains, bare last week, now have a cover from 2 to 10 inches deep, and portions of Kansas and Nebraska, slightly covered last week, are now bare.

There has been a considerable increase in the depth of the snow cover from northern Maryland to New England and at points in Ohio, Michigan, and Indiana. In the mountain districts of the West there has been no marked change in the area covered or in the amounts, as compared with the preceding week. Practically no snow has fallen so far this season over the Plateau region or in the mountains of California, the absence of snowfall in the Sierra Nevada being quite unusual.

The greater part of the winter wheat area from Kansas and Nebraska eastward has had a continuous snow cover during practically the entire cold period. As the ground is probably largely unfrozen the snow cover should afford some opportunity for improvement in the condition of the crop.

ICE IN RIVERS AND HARBORS.

Continued cold weather caused the formation of additional ice over all streams and lakes where it was reported last week, and the amounts are now considerably greater than usual so early in the winter.

The Missouri and Mississippi rivers are closed throughout their upper portions, and considerable ice is reported in the streams of the Appalachian Mountain regions as far south as northern Alabama.

In New England the ice has attained unusual thickness for the season, and harvesting has already begun. The harbors of the Great Lakes are generally closed, the ice ranging from 5 to 10 inches in the lower, and from 8 to 15 inches in the upper Lakes.

P. C. DAY, Climatologist and Chief of Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 17, 1917.

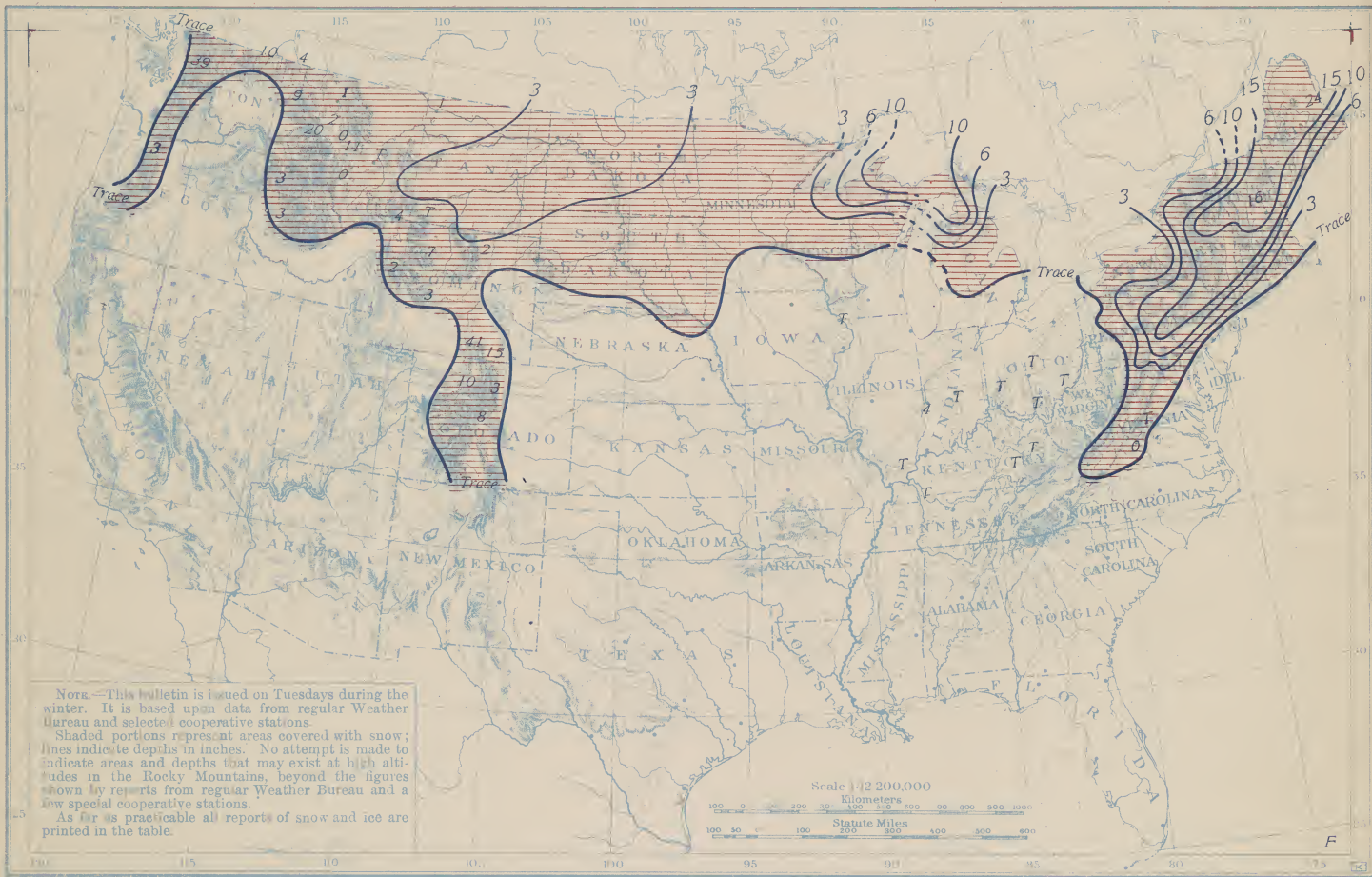
Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arkansas.	Inches	Inches	Michigan—Cont'd.	Inches	Inches	Ohio—Cont'd.	Inches	Inches
Bentonville.....	2		Albion.....	15		Columbus.....	7	
Fort Smith.....	T.	0.0	Chatham.....	22		Dayton.....	6	4.0
Little Rock.....	1	*	Detroit.....	8	8.0	Marion.....	10	
Colorado.			Escanaba.....	2	8.0	Sandusky.....	7	10.0
Durango.....	0	†	Grand Haven.....	7		Tiffin.....	10	
Steamboat Springs.....	13		Harrisville.....	12		Toledo.....	7	8.0
Connecticut.			Houghton.....	19	8.0	Waverly.....	7	
Hartford.....	11	8.0	Iron River.....	1		Oregon.		
New Haven.....	8	0.0	Ironwood.....	14		Gov't Camp.....	3	
Delaware.			Lansing.....	5		Pennsylvania.		
Millsboro.....	4		Ludington.....	7	0.0	Erie.....	7	5.0
Wilmington.....	2		Mancelona.....	24		Harrisburg.....	11	8.0
Dist. of Columbia.			Manistee.....	14		Hyndman.....	9	
Washington.....	3	1.5	Port Huron.....	8	7.0	Philadelphia.....	3	8.0
Idaho.			Saginaw.....	3	6.5	Pittsburgh.....	4	*
Ketchum.....	1		Sault Ste. Marie.....	6	5.0	Reading.....	10	
Porterville.....	2		Minnesota.			Seranton.....	6	
Soldier Creek.....	2		Duluth.....	1	15.0	Stroudsburg.....	18	
Vienna Mine.....	42		Fort Ripley.....	2		Rhode Island.		
Illinois.			Grand Meadow.....	3		Kingston.....	2	
Cairo.....	4	†	Minneapolis.....	1		Providence.....	3	*
Camp Point.....	4		Moorhead.....	1	12.0	South Carolina.		
Chicago.....	3		St. Paul.....	1	11.0	Columbia.....	T.	0.0
New Burnside.....	6		Thief River Falls.....	2		Greenville.....	2	
Peoria.....	4	7.0	Missouri.			South Dakota.		
Springfield.....	5		Brunswick.....	4		Huron.....	1	11.0
Urbana.....	4		Columbia.....	3		Pierre.....	T.	13.0
Indiana.			Hannibal.....	2	8.0	Rapid City.....	T.	
Evansville.....	10	4.0	Ironton.....	4		Yankton.....	1	12.0
Fort Wayne.....	6		Kansas City.....	T.	†	Tennessee.		
Indianapolis.....	6		Lamar.....	4		Chattanooga.....	1	1.5
Terre Haute.....	5	5.5	St. Joseph.....	T.	†	Memphis.....	3	0.0
Iowa.			St. Louis.....	3	†	Nashville.....	2	0.0
Albia.....	5		Springfield.....	3		Utah.		
Atlantic.	4		Unionville.....	3		East Portal.....	6	
Charles City.....	2		Montana.			Heber.....	1	
Davenport.....	3	9.0	Billings.....	7		Vermont.		
Des Moines.....	2	7.0	Findon.....	20		Brattleboro.....	24	10.0
Dubuque.....	5	7.0	Haugan.....	12		Burlington.....	10	*
Estherville.....	2		Havre.....	T.		Northfield.....	22	
Forest City.....	2		Helena.....	5		St. Johnsbury.....	16	
Iowa City.....	5		Kalispell.....	6		Wells River.....	14	
Keokuk.....	3	8.0	Missoula.....	4		Virginia.		
Sioux City.....	2	10.0	Red Lodge.....	4		Callaville.....	6	
Kentucky.			Nebraska.			Danville.....	6	
Beattyville.....	2		Omaha.....	T.	11.0	Lynchburg.....	3	6.0
Eubank.....	5		Valentine.....	T.		Norfolk.....	2	0.0
Lexington.....	8		New Hampshire.			Richmond.....	3	0.0
Louisville.....	6	0.0	Bethlehem.....	22		West Point.....	6	
Maysville.....	6		Concord.....	18	10.0	Woodstock.....	3	
Owensboro.....	3		Hanover.....	18		Wytheville.....	10	
St. John.....	8		Keene.....	18		Washington.		
Maine.			New Jersey.			Cascade Tunnel.....	40	
Bangor.....	10	14.0	Sandy Hook.....	T.	0.0	Laurier.....	16	
Eastport.....	3	0.0	Trenton.....	2	6.5	Stamper.....	14	
Gardiner.....	12	7.0	New York.			West Virginia.		
Greenville.....	27	10.0	Albany.....	12	3.5	Elkins.....	2	
Lewiston.....	14	9.0	Binghamton.....	10		Holcomb.....	3	
Portland.....	10	0.0	Buffalo.....	19	5.0	Parkersburg.....	3	†
Baltimore.....	2	0.0	Canton.....	16		Wisconsin.		
Frederick.....	12		Cutogue.....	3		Green Bay.....	T.	7.5
Oakland.....	4		Rochester.....	11	6.0	La Crosse.....	3	9.0
Princess Anne.....	1		Syracuse.....	18		Madison.....	3	
Massachusetts.			Warwick.....	20		Milwaukee.....	5	8.0
Amherst.....	8		North Carolina.			Wausau.....	1	0.0
Concord.....	9		Asheville.....	1	1.5	Wyoming.		
Holyoke.....	10		Charlotte.....	3		Alta.....	3	
Nantucket.....	T.	0.0	North Dakota.			Cheyenne.....	T.	
Turners Falls.....	18		Bismarck.....	3	15.0	Dome Lake.....	20	
Michigan.			Devils Lake.....	T.		Lander.....	T.	
Alpena.....	5	5.0	Williston.....	T.	13.0	Sand Lake.....	45	
Battle Creek.....	8		Ohio.			Sheridan.....	2	
Big Rapids.....	5		Beverly.....	4		South Pass City.....	5	
Bloomington.....	9		Cincinnati.....	12	†	Yellowstone Park.....	3	
			Cleveland.....	6	9.0			

\* Shore ice. † Floating ice. ‡ Ice gorged. T. indicates trace.



W 3778

# SNOW AND ICE BULLETIN.



DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 24, 1917.

WASHINGTON, D. C., December 26, 1917.

## GENERAL REVIEW OF THE WEATHER DURING THE PAST WEEK.

Low pressure over the Northwest resulted in generally moderate temperatures during much of the week in the districts from the Mississippi Valley westward, while over the more northeastern districts high pressure persisted, and moderately cold weather prevailed.

The storm at the beginning of the week in the British Northwest largely dissipated in its eastward progress, and only light precipitation resulted therefrom after it entered the United States, except in portions of Washington and Oregon, where the rainfall was heavy. In southern districts moderate winter weather was the rule, and but little precipitation occurred.

By Monday strong high pressure had moved into the Dakotas and temperatures in all northwestern districts had fallen 20° to 40° or more. At the same time light rains were falling in the Great Lakes region, and low pressure and cloudy weather were developing in Texas and Oklahoma.

At the present writing cold weather prevails very generally over the interior districts, from the Rocky Mountains eastward, with local rain or snow in portions of the Atlantic and Gulf States. In the far Northwest a storm is moving in from the Pacific, and rain is general from central California northward.

## DEPTH OF SNOW.

No extensive precipitation occurred during the week, and the general reaction to higher temperatures over most districts caused a substantial reduction in the extent and depth of the snow cover as compared with the preceding week. The considerable body of snow over the Ohio and middle Mississippi Valleys at the beginning of the week had practically disappeared by Monday night, and a general reduction in depth of from 3 to 8 inches had occurred in the Appalachian Mountains and northeastern districts. The snow cover in the upper Lakes region was materially reduced, except at a few local points, and throughout the mountain districts of the West reports indicate a general reduction in depth, amounting in some cases to 10 inches or more. However, at points in the mountains of eastern Washington, northern Idaho, and locally in Wyoming and Oregon there was some increase over the amounts reported a week ago. The absence of any appreciable snow in the mountains of California and adjoining States and generally over the elevated portions of the Plateau region is most unusual for the period of the year.

At the close of the week the greater portion of the winter wheat area was bare, but the moisture from the melting snow where the ground had been covered was doubtless very beneficial. Reports indicate that since Monday night several inches of snow had fallen in portions of the Ohio Valley and to the northeastward, which should afford some protection to wheat from the cold weather now prevailing in those districts.

## ICE IN RIVERS AND HARBORS.

Over most northern districts the weather continued sufficiently cold to cause the formation of some additional ice, but the increases were small, as a rule. In the southern districts, where ice had formed during the two preceding weeks, there was a very general breaking up, due to the warmer weather, and but little ice now remains on the principal tributaries of the Ohio, or from the Potomac southward. In the lower Lakes region considerable ice disappeared, and some of the harbors are now clear. Ice harvest continued in New England.

P. C. DAY, Climatologist and Chief of Division.

Stations.			Stations.			Stations.		
Snow.			Snow.			Snow.		
Inches			Inches			Inches		
<b>Colorado.</b>			<b>Michigan—Contd.</b>			<b>Oregon.</b>		
Dillon.....	0	*	Maple Ridge.....	12	.....	Bend.....	2	.....
Durango.....	3	.....	Marquette.....	12	.....	Gov't Camp.....	3	.....
Leadville.....	10	.....	Newberry.....	9	.....	Joseph.....	T.	.....
Steamboat Springs.....	10	.....	Port Huron.....	T.	5.5	Prairie City.....	1	.....
<b>Connecticut.</b>			Saginaw.....	T.	8.0	Welches.....	T.	.....
Hartford.....	8	10.0	St. Ignace.....	2	.....	<b>Pennsylvania.</b>		
New Haven.....	4	0.0	Sault Ste. Marie.....	6	.....	Drifton.....	10	.....
West Cornwall.....	11	.....	<b>Minnesota.</b>			Erie.....	T.	2.0
<b>Dist. of Columbia.</b>			Duluth.....	2	16.0	Harrisburg.....	7	8.0
Washington.....	T.	.....	International Falls.....	2	.....	Hyndman.....	4	.....
<b>Idaho.</b>			Minneapolis.....	T.	.....	Lawrenceville.....	6	.....
Idaho City.....	3	.....	Moorhead.....	1	15.0	Millintown.....	10	.....
Mackay.....	1	.....	Roseau.....	T.	5.5	Parkers Landing.....	1	.....
McCall.....	3	.....	St. Paul.....	T.	12.0	Reading.....	3	0.0
Oxford Ranger Sta.....	20	.....	Thief River Falls.....	2	.....	Ridgway.....	3	.....
Porthill.....	4	.....	Winton.....	2	.....	Scranton.....	T.	.....
Wallace.....	9	.....	<b>Missouri.</b>			Warren.....	5	.....
<b>Illinois.</b>			Hannibal.....	0	.....	Williamsport.....	6	.....
New Burnside.....	T.	.....	Kansas City.....	0	.....	<b>Rhode Island.</b>		
Peoria.....	0	5.5	<b>Montana.</b>			Kingston.....	T.	.....
<b>Indiana.</b>			Findon.....	8	.....	Narragansett Pier.....	T.	0.0
Indianapolis.....	T.	.....	Hat Creek.....	11	.....	Providence.....	T.	.....
Terre Haute.....	4	0.0	Haugan.....	2	.....	<b>South Dakota.</b>		
<b>Iowa.</b>			Havre.....	1	.....	Huron.....	T.	14.0
Des Moines.....	0	4.0	Helena.....	T.	.....	Pierson.....	T.	14.0
Dubuque.....	T.	.....	Kalispell.....	1	.....	Rapid City.....	2	.....
Keokuk.....	0	2.0	Miles City.....	5	.....	Yankton.....	T.	12.0
Sioux City.....	T.	11.0	Red Lodge.....	0	.....	<b>Vermont.</b>		
<b>Kentucky.</b>			<b>Nebraska.</b>			Brattleboro.....	18	13.0
Beattyville.....	T.	.....	Omaha.....	0	.....	Burlington.....	5	.....
Eubank.....	T.	.....	<b>New Hampshire.</b>			Northfield.....	15	.....
Hopkinsville.....	T.	.....	Bethlehem.....	16	.....	St. Johnsbury.....	11	.....
<b>Maine.</b>			Concord.....	14	12.0	<b>Virginia.</b>		
Bangor.....	8	16.0	Durham.....	7	.....	Danville.....	T.	.....
Cornish.....	15	.....	Hanover.....	16	.....	Lynchburg.....	0	4.0
Eastport.....	T.	0.0	Keene.....	13	.....	Staunton.....	T.	.....
Gardiner.....	10	8.0	<b>New York.</b>			Woodstock.....	T.	.....
Greenville.....	18	10.5	Albany.....	3	4.0	Wytheville.....	1	.....
Houlton.....	24	.....	Angelica.....	2	.....	<b>Washington.</b>		
Millinocket.....	16	.....	Binghamton.....	2	.....	Cascade Tunnel.....	39	.....
Portland.....	5	0.0	Buffalo.....	2	.....	Laurier.....	10	.....
Van Buren.....	7	.....	Canton.....	3	.....	<b>West Virginia.</b>		
<b>Maryland.</b>			Cazenovia.....	14	.....	Hinton.....	1	.....
Frederick.....	5	.....	Cutchogue.....	1	.....	Parkersburg.....	0	.....
Oakland.....	T.	.....	Herkimer.....	6	.....	<b>Wisconsin.</b>		
<b>Massachusetts.</b>			Ithaca.....	2	.....	Barron.....	2	.....
Amherst.....	7	.....	Oswego.....	9	.....	Eau Claire.....	T.	.....
Boston.....	T.	.....	Perrysburg.....	2	.....	Grand Rapids.....	T.	.....
Concord.....	8	.....	Rochester.....	2	.....	Green Bay.....	0	7.0
Fitchburg.....	12	.....	Rome.....	16	.....	La Crosse.....	0	10.0
Mansfield.....	2	.....	Roxbury.....	12	.....	Medford.....	3	.....
<b>Michigan.</b>			Wappingers Falls.....	8	.....	Park Falls.....	2	.....
Alpena.....	1	.....	Warwick.....	10	.....	Rhineland.....	3	.....
Big Rapids.....	3	.....	<b>North Dakota.</b>			Wausau.....	T.	9.5
Cadillac.....	1	.....	Bismarck.....	3	17.0	<b>Wyoming.</b>		
Calumet.....	17	.....	Devils Lake.....	4	.....	Alta.....	2	.....
Detroit.....	0	4.0	Williston.....	3	16.0	Buffalo.....	2	.....
Escanaba.....	1	8.0	<b>Ohio.</b>			Fox Park.....	15	.....
Grand Rapids.....	T.	.....	Beverly.....	T.	.....	Sand Lake.....	41	.....
Houghton.....	14	9.5	Cleveland.....	0	12.0	Sheridan.....	5	.....
Iron Mountain.....	2	.....	Dayton.....	T.	0.0	South Pass City.....	3	.....
Ironwood.....	8	.....	Marion.....	0	.....	Valley.....	7	.....
Ludington.....	T.	.....	Sandusky.....	0	8.0	Yellowstone Park.....	4	.....
Mancelona.....	10	.....	Toledo.....	0	.....			
Manistee.....	8	.....	Waverly.....	T.	.....			

\* Shore ice. † Floating ice. ‡ Ice gorged. § Measurement impracticable. T. indicates trace.